

Rail and Water Transport in India



Ports and Waterways

- Water transport is the cheapest and the oldest mode of transport. It operates on a natural track and hence does not require huge capital investment in the construction and maintenance of its track except in case of canals.
- Suitable for heavy bulky goods: Waterway can carry much larger quantities of heavy and bulky goods such as coal, and, timber, etc
- Cheapest means of transport: Rivers are a natural highway that does not require any cost of construction and maintenance.

Types of Waterways

- **Inland water ways**
- Inland water transport consists of transport by rivers, canals, and lakes.
- The total navigable length of the inland waterway is 14500 km, out of which about 5200 km of river and 4000 km of canals can be used by mechanized crafts Account for 1% of transport
- Canals are controlled by Inland Water Way Authority. The Inland Waterways Authority of India Act, 1985 empowers the Government to declare waterways with potential for the development of shipping and navigation as National Waterways.
- **Ocean-transport**
- Ocean transport is indispensable for foreign trade
- It operates on a natural track, i.e., the sea, and does not require any investment in the construction and maintenance of its track.

National Waterways

National Waterways Act came into effect in 2016. 6 National Waterways which are as follows:

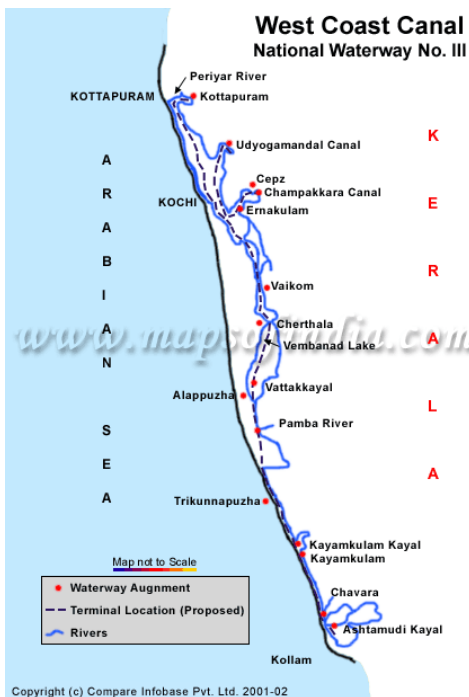
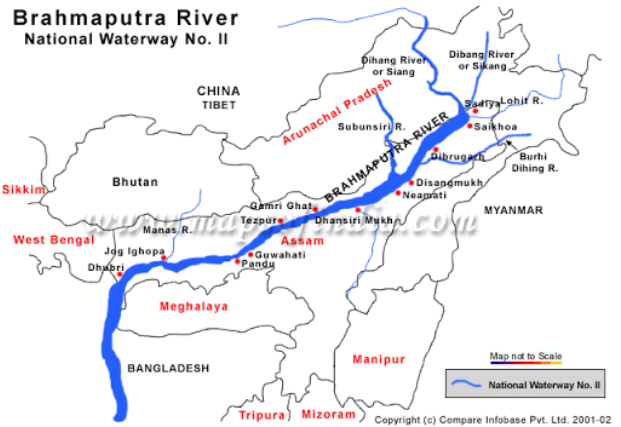
- **National Waterways 1 or NW1**
- It starts from Allahabad(Prayagraj) to Haldia with a distance of 1620 km.
- The NW 1 run through the Ganges, Bhagirathi, and Hooghly river system with having fixed terminals at Haldia, Farrakka, and Patna and floating terminals at most of the riverside cities like Kolkata, Bhagalpur, Varanasi, and Allahabad.
- **It is the longest National Waterways in India.**



National Waterways 2

It is a stretch on the Brahmaputra river from Sadiya to Dhubri in Assam state.

The NW 2 is one of the major freight transportation waterways of northeast India and the **third-longest Waterways with and a total length of 891 km.**



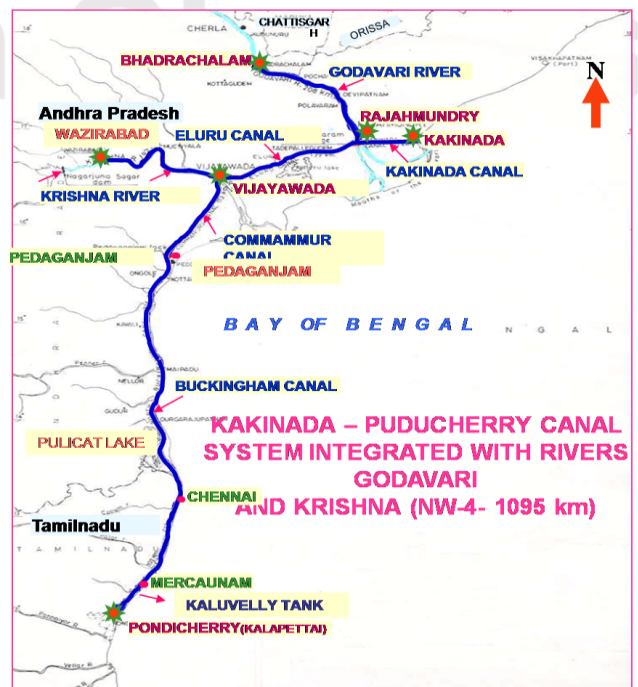
National waterways 3 or the West Coast Canal

It is located in Kerala state and runs from Kollam to Kottapuram.

The 205 km long West Coast Canal is India's first waterway with all-time navigation facility.

National Waterway 4

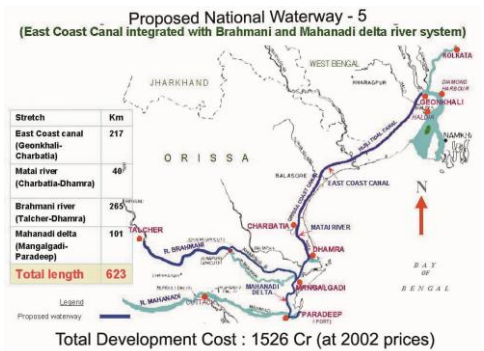
It is connected from Kakinada to Pondicherry through Canals, Tank, and River Godavari along with Krishna river. The **NW 4 the second-longest waterway of India with a total length of 1095 km in Andhra Pradesh and Tamil Nadu.**



National Waterway 5

It connects Orissa to West Bengal using the stretch on Brahmani River, East Coast Canal, Matai river, and Mahanadi River Delta.

The 623 km long canal system will handle the traffic of cargo such as coal, fertilizer, cement, and iron.



National waterway 6

It is the proposed waterway in Assam state and will connect Lakhimpur to Bhangra in river Barak.

The 121 km long waterway will help in trading between the town of Silchar to Mizoram State.

Ocean routes and Ports

- India has a coastline of about 7517 km.
- There are 13 major ports and 200 minor ports. 95% of India's foreign trade and 70% of the value is trade takes place through seaways.
- There are 13 major ports in India that handle approximately 58% of cargo traffic.
- Cargo handled at major ports is bulk (44% – iron ore, coal, and fertilizer), liquid (33% petrol, oil, and lubricants), and container (23%).
- There are 13 major ports in the country; 7 on the Eastern coast and 6 on the Western coast. Further, there are about 200 non-major ports.

Kolkata Port

- Only riverine major port in India.
- Known for twin dock systems viz, Kolkata Dock System (KDS) on the eastern bank and Haldia Dock Complex (HDC) on the western bank of river Hooghly.

Paradip Port

- It is an artificial, deep-water port on the East coast of India in the Jagatsinghpur district of Odisha. Located at the confluence of river Mahanadi in Bay of Bengal in Odisha.
- It was the first major port on East Coast commissioned in independent India.

New Mangalore Port

- Located at a side called Panambur in Karnataka at Gurupura river confluence with the Arabian Sea.



Cochin Port

- Located on the Willington island on the South – West coast of India
- Located on the crossroads of the East-West Ocean trade.
- The port is called the natural gateway to the vast industrial and agricultural produce markets of South – West India.

Jawaharlal Nehru Port

- It is also known as Nhava Sheva and is **the largest container port in India**, handling around half of the containers of all major ports.
- It is located on the eastern shore of Mumbai harbour off Elephanta Island and is accessed via Thane Creek.

Vadhavan Port

- This will be 13th major port in India.
- Vadhavan port has been planned by the JNPT as an 'All Weather, All Cargo' satellite port to enhance capabilities in handling deep draft ships and larger vessels.

Mumbai Port

- One of the oldest modern ports of India. Initially, the location was used by the navies of Shivaji.

Kandla Port

- Kandla port was built after partition as the Karachi port on the western coast had gone to Pakistan. It is known for handling much of the crude oil imports of India.

Vishakhapatnam Port

- Vizag port is located in Andhra Pradesh and is known for the bulk of cargo handling on the east coast.



Chennai Port

- Chennai Port is the largest port in the Bay of Bengal and the second largest port of India after JNPT. **It is the largest port at the east coast.**

Tuticorin Port

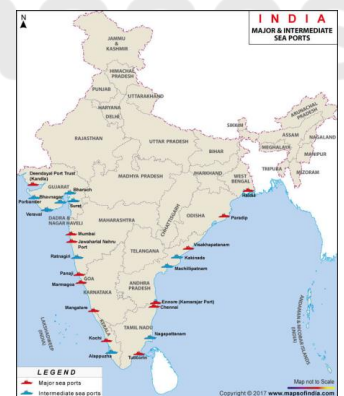
- This port has been now renamed as V.O. Chidambaram Port. It is located in the Gulf of Mannar. V.O.Chidambaram Port is an artificial port.
- Tuticorin is the only port in South India to provide a direct weekly container service to the United States.

Ennore Port

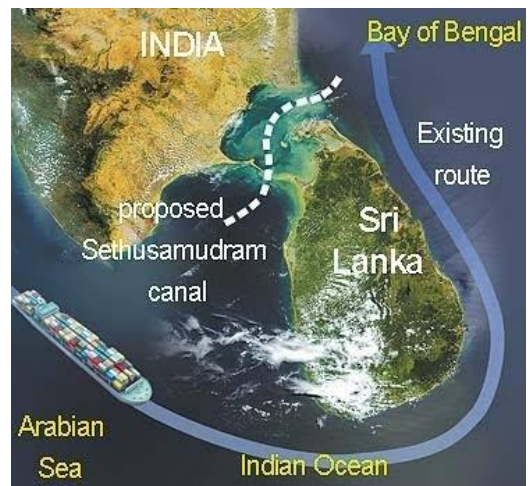
- This port is now named as Kamarajar Port Limited. It is the first corporate port of India and is registered as a public company with 68% stake held by the government.

Mormugao Port

- Mormugao port in Goa is the leading iron ore exporting port of India.



- Sethusamudram Project is a long pending plan to build a shipping canal between India and Sri Lanka across the Palk Strait.
- 1860 by Alfred Dundas Taylor, it recently received approval of the Indian government. The proposed route through the shoals of Ram Setu is opposed by some groups on religious, environmental and economical grounds.



Indian Railways

- India's railway network is the 4th largest railway network in the world and 2nd largest in Asia, under single management.
- Indian Railway is the main artery of the country, it is also called as lifeline of India which provides both freight and passenger mode of transportation.
- It contributes in the national growth and economic integration of the country.

Growth and development of Indian railways

- The first railway line in India was opened for public traffic on 16 April 1853 between Mumbai and Thane over a distance of 34 km.
- Meanwhile, the construction of the railway lines was going on in the eastern part of the country, and the first section of the East Indian Railway, from Howrah to Hugli, a distance of 37 km was inaugurated on 15 August 1854.
- The line from Kanpur to Allahabad was opened in 1859.
- The southern part of the country did not lag behind and got its first 105 km long railway line from Royapuram to Arcot in 1856.

- In 1871, the Mumbai-Chennai route was also opened.
- In 1994, the first live telecast of the railway budget took place.
- **At present India has the second-largest railway network in Asia and the fourth largest in the world after the USA (2, 27,736 km), Russia (2, 22,293 km), and China (87,157 km). But India tops the world's leading countries with regard to passenger/kilometer earned.**
- First Electric coach Train ran on the 3rd February 1925 between Bombay VT and Kurla stations.
- **Indian Railways was nationalized in 1951**
- Toilets were introduced on Indian Railways in 1909.

Facts about Indian Railways

- The Fairy Queen is the oldest functioning steam engine in the world. It is plying between New Delhi and Alwar in Rajasthan.
- **Four sites of Indian Railways have been declared as “World Heritage sites” by UNESCO.** They are Darjeeling-Himalayan Railway, Nilgiri Mountain, Mumbai CST, and Kalka-Shimla Railways.
- Indian Railways started computerized reservations in New Delhi in 1986.
- **In 2000, Mamata Banerjee was the first woman to become Railway Minister.**
- March 8th 2021 – The first woman driver of Indian Railways, **Surekha Yadav** drove all women-staffed Mumbai-Lucknow Special train on the occasion of International Women’s Day.

- The Mettupalayam-Ooty Nilgiri Passenger train is the slowest train which runs at an average speed of 10 kmph.
- The New Delhi Railway Station has the world’s largest Route Relay Interlocking System.
- Indian Railways is the world’s seventh-largest employer with over 1.4 million employees on its rolls.
- The renewed platform at Gorakhpur Railway Station in Uttar Pradesh has become the world’s longest, measuring 1,366 meters.
- Indian Railways’ longest tunnel is Pir Panjal that links Kashmir Valley with Banihal in Jammu.
- Station with the shortest name is Ib in Odisha.
- A separate budget for the Railways has its genesis in the recommendations of the **10-member Acworth Committee in 1920-21**, headed by British railway economist William Acworth. Following his report, the railway finances of India were separated from the general government finances in 1924.

- Indian Railways has a mascot – Bholu, the Guard Elephant.
- The northernmost railway station is Baramulla in Jammu and Kashmir.
- Westernmost is Naliya near Bhuj in Gujarat.
- The southernmost railway station is Kanyakumari,
- Eastmost of India is Ledo on branch line from Tinsukia.
- **The longest Tunnel is Pir Panjal Railway Tunnel 11.215 km.**
- Ahmedabad Mumbai Central Double Decker Express is India’s first double Decker train.
- Indian Railways launched an awareness campaign train on World AIDS Day, December 1, 2007, called the Red Ribbon Express.
- **Longest rail route in India:- From Dibrugarh (Assam) To Kanyakumari (Vivek express Train) 4273 Km.**

- Biggest Electrical loco shed is situated at Mughal Sarai (Uttar Pradesh).
- Shatabdi Express began for the first time between two station Between New Delhi to Jhansi On 10, July 1988.
- First Rajdhani Express ran between two stations New Delhi–Howrah on 1st March 1969.
- Train that runs between India and Pakistan is Samjhauta Express.
- Train running between India and Bangladesh is Maitree Express.

- The Highest railway station in India is Ghum railway station (West Bengal).
- The Bogibeel Bridge(4.9km) is a combined road and rail bridge over the Brahmaputra River in the northeastern Indian state of Assam between Dhemaji district and Dibrugarh district, which was started in the year 2002 and took a total of 200 months to complete, **Bogibeel river bridge is the longest rail-cum-road bridge in India**
- Fastest train in India : As for Vande Bharat Express is the fastest train in India with a speed of 180 km/hr, followed by Gatimaan express with a speed of 160km/hr.
- Shortest run by a train : Nagpur and Ajni stations situated just 3km from each other.



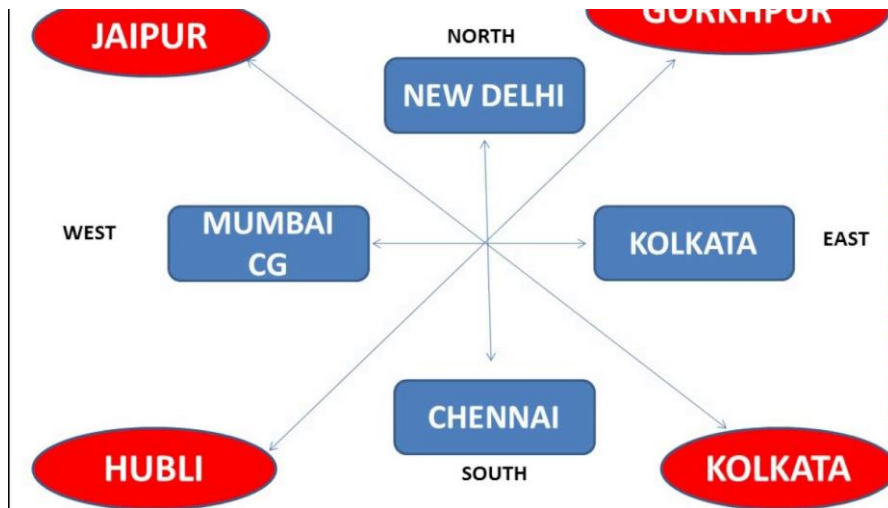
- Construction started: August 2004
- Total length: 1,315 m
- Height: 359 m
- The Chenab Rail Bridge is an Indian railway steel and concrete arch bridge between Bakkal and Kauri in the Reasi district of Jammu and Kashmir, India.



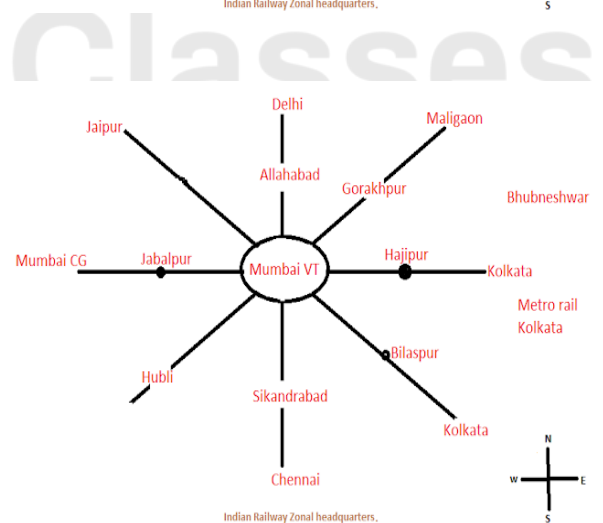
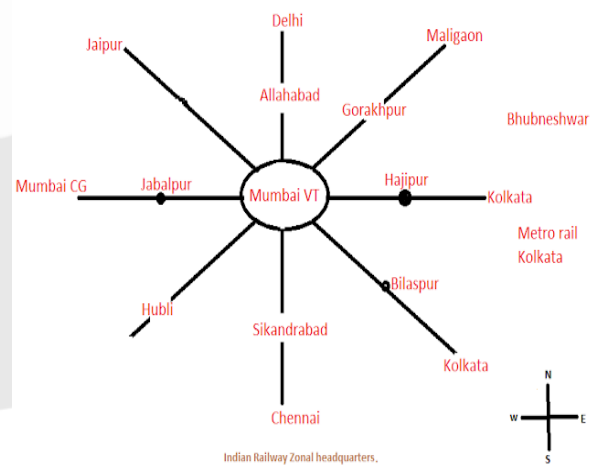
The eight manufacturing plants of the Indian Railways, called Production Units, are managed directly by the ministry

Sr No	Production units	Location
1.	Chittaranjan Locomotive Works	Chittaranjan (West Bangal)
2.	Diesel Locomotive Works	Varanasi (Uttar Pradesh)
3.	Diesel Loco Modernisation Works	Patiala (Panjab)
4.	Rail Coach Factory	Kapurthala (Panjab)
5.	Integral Coach Factory	Chennai (Tamilnadu)
6.	Rail Wheel Factory	Bangalore (Karnataka)
7.	Rail Wheel Plant	Bela in Chhapra (Bihar)
8.	Modern Coach Factory	Raebareli (Uttar Pradesh)

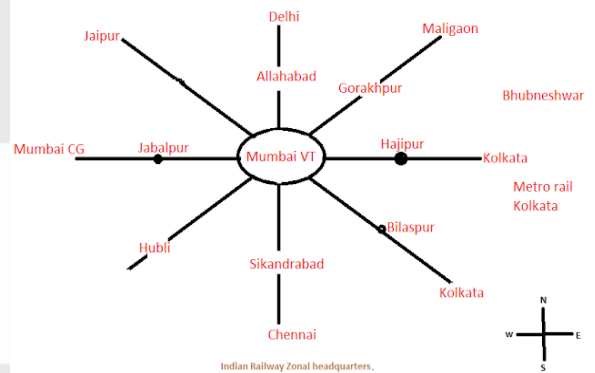
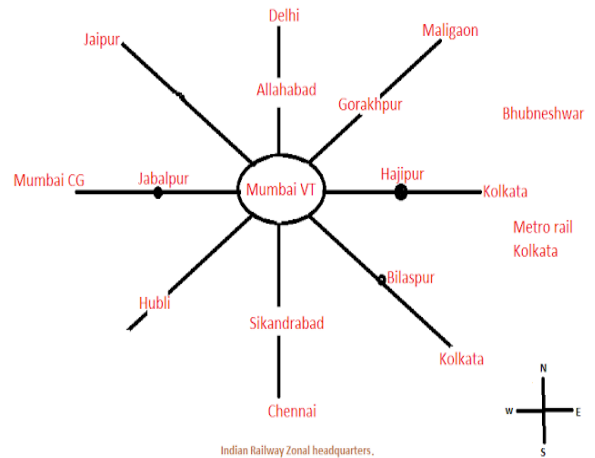
Indian Railways Zone, Headquarters & Divisions



Sr No	Indian Railway Zone	Headquarters
1.	Northern Railway (Largest)	Baroda House, New Delhi
2.	North Eastern Railway	Gorakhpur
3.	Northeast Frontier Railway (Smallest)	Maligaon, Guwahati
4.	Eastern Railway	kolkata
5.	South Eastern Railway	Garden Reach, Kolkata
6.	South Central Railway	Secunderabad
7.	Southern Railway	Chennai



8.	Central Railway	Mumbai
9.	Western Railway	Churchgate, Mumbai
10.	South Western Railway	Hubli
11.	North Western Railway	Jaipur
12.	West Central Railway	Jabalpur
13.	North Central Railway	Allahabad
14.	South East Central Railway	Bilaspur
15.	East Coast Railway	Bhubaneshwar
16.	East Central Railway	Hajipur
17.	Kolkata Metro	Kolkata
18.	South Coast Railway	Visakhapatnam



INDIAN RAILWAYS NETWORK

After Telangana was created and the headquarters of the South Central Railway (SCR) went to the new state, Andhra Pradesh began demanding a new railway zone for the state. On Feb 27 Minister for Railways Piyush Goyal announced the creation of the 18th railway zone – the South Coast Railway (SCoR) – of the country based in Visakhapatnam.

NUTS AND BOLTS

- South Coast Railway will comprise existing Guntakal, Guntur and Vijayawada divisions that currently fall under the South Central Railway
- Waltair (having its headquarters in Visakhapatnam) division – one of the three divisions of the East Coast Railway Zone (ECoR) covering the northern districts of Andhra Pradesh, parts of Chhattisgarh and Odisha – will be split into two
- One part of the Waltair division will be incorporated in the new zone and merged with the neighbouring Vijayawada division
- The remaining portion of the Waltair division will be converted into a new Rayachoti division in Odisha under the East Coast Railway
- South Central Railway will consist of the Hyderabad, Secunderabad and Nanded divisions
- According to an Indian Railways internal assessment, the cost of creating infrastructure for the new zone is around Rs 205 crore

INDIAN RAILWAYS IN BRIEF

2019: February 27, South Coast Railway, the 18th railway zone, with HQ in Visakhapatnam announced

AT PRESENT: 17 zones and a total of a total of 73 divisions. Zonal headquarters are located in 14 cities: Kolkata, Hajipur, Gorakhpur, Allahabad, Delhi, Secunderabad, Chennai, Hubballi, Mumbai, Jaipur, Bilaspur, Jabalpur, Guwahati, and Bhubaneswar

2002-2003: Seven new zones and eight new divisions were created

1951-52: Six zonal railways were created

1947: India's total rail network was 54,380 km, comprising 42 big and small networks – networks as small as Sangli (8 km) or as big as Nizam State Railway (2,125 km)

IAN'S GRAPHICS

MCQ

Which of the following was the first India's Steam Engine?

- A. Deshbandhu
- B. Gandhi
- C. Vayudoot
- D. Sethu Samundram

Match the following

- | | |
|--|--------------|
| a. Indira Gandhi International Airport | 1. Delhi |
| b. Dabolim International Airport | 2. Goa |
| c. Raja Sansi International Airport | 3. Amritsar |
| d. Sardar Vallabhbhai Patel | 4. Ahmedabad |

Code:

- | | a | b | c | d |
|----|---|---|---|---|
| A. | 4 | 3 | 2 | 1 |
| B. | 4 | 1 | 3 | 2 |
| C. | 1 | 2 | 3 | 4 |
| D. | 1 | 4 | 2 | 3 |

India's first Aeroplane Post Service was started between:

- A. Allahabad to Naini
- B. Allahabad to Bombay (Now Mumbai)
- C. Allahabad to Calcutta (Now Kolkata)
- D. Allahabad to Delhi

Find out the odd one:

- A. Broad Gauge
- B. Long Gauge
- C. Narrow Gauge
- D. Meter Gauge

Question	Answer
1	a
2	c
3	A
4	B



Parcham Classes